REMARKS

Specification

The drawings have been cancelled and the material disclosed therein has been inserted into the specification.

Rejections Under 35 USC 112, second paragraph, and Under 35 USC 101

In claim 11, in the noted species, "brom" was changed to "bromo" and "sulfonsäure" was changed to "sulfonic acid." These terms originally written in German have not been translated to their English equivalents before.

The terms "all related isotopes," "solvates" and "polymorphs" is removed from the rejected claims. The term "prodrugs" was not present in the claims, but was rejected. A new claim 30 is added which recites "an isotope, solvate, polymorph or prodrug thereof."

The term "all related isotopes" in claim 30 is recited only as an "isotope" thereof. One of ordinary skill in the art understands the meaning of the term "isotope" and can easily determine whether a given compound is an isotope of a compound of formula I. As such, there is no indefiniteness.

The term prodrug is defined in the specification on pages 15 and 16 and a large number of types of prodrugs are provided, which provides guidance to one of ordinary skill in the art in determining the scope of this term. In view of this disclosure, there is no indefiniteness. Applicants added new claim 31 which more specifically defines the prodrugs.

The rejections to the form of the claims not specifically addressed above are clearly overcome by the amendments.

Rejections Under 35 USC 112, first paragraph

The term "prodrug" has been rejected as allegedly not enabled.

The Office Action's main concern is the amount of experimentation needed in determining whether any particular derivative of a compound of the claims, e.g., an ester of a claimed alcohol, is indeed a prodrug or not, i.e., whether such a compound satisfies the three criteria for being a prodrug as alleged by the Office Action on page 5.

Testing the activity levels of compounds in this art is merely routine and it does not

require a "clinical trial setting" as alleged. The testing of activity levels can be done, for example, in *in vitro* assays. While it may take a considerable effort, which is not admitted, to make and test activity levels of certain compounds of the claims and their derivatives, e.g., potential prodrugs thereof, such is not undue experimentation. In the pharmaceutical arts, the testing of compounds is merely routine. See *In re Wands*, 858 F.2d 731, 735, 8 USPQ2d 1400 (Fed. Cir. 1988), stating that a "considerable amount of experimentation is permissible, if it is merely routine ... ." In *Wands*, the PTO alleged a success rate of 2.8% when making the lack of enablement rejection, which rejection the Federal Circuit reversed.

Also, whether a compound would actually produce the active compound in the body at a meaningful concentration can also be tested without undue experimentations. Considering the nature of the art, one of ordinary skill in this art would expect that a considerable effort may be needed, which is not admitted.

The terms "solvate and polymorph" have been rejected as allegedly not enabled. The Office Action alleges that it is unpredictable whether in a given situation a solvate or a polymorph will form. However, it would not take undue experimentation to bring any compound of the claims, which compound is enabled, together with various solvents to check whether solvates or polymorphs have formed.

The Office Action alleges that the over eight hundred compounds disclosed in the specification were in contact with water or other solvents and that there was no showing that a solvate or polymorph has formed. The examples are directed to the preparation of various compounds of the claims. Water and other solvents were used during various process steps in obtaining the compounds of the claimed invention. The examples are not directed to efforts of making solvates or polymorphs. Various solvents were not brought together with the products of the examples as each example ends with a step yielding the compound of interest of the given example. Thus, the examples in the specification are not evidence of failure in forming solvates or polymorphs.

The term "related isotope" has also been rejected as allegedly not enabled. The term "related" has been removed. The Office Action alleges that there is a general lack of

predictability in making isotopes and that there is no expectation that all isotopes would share the same utility. While the making of isotopes is a specialized art, it does not mean that the making thereof would require undue experimentation. One of ordinary skill in the art can without undue experimentation design a desired isotope of the claimed compounds. Additionally, even if claim 30 includes inoperative embodiments, which is not admitted, such is not problematic because one of ordinary skill in the art would know how to avoid the same. See *In re Dinh-Nguyen*, 181 USPQ 46 (CCPA 1974), and *In re Sarett*, 140 USPQ 474 (CCPA 1964).

The method claims were amended such that they are directed to the treatment of cancer (claim 17) and the treatment of various more specific cancers (claim 18). New method claims directed to the same diseases have also been entered.

First and foremost, a specification disclosure which "contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as in compliance with the enabling requirement of the first paragraph of § 112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support." *In re Marzocchi*, 169 U.S.P.Q. 367, 369 (1971). "The PTO must have adequate support for its challenge to the credibility of applicant's statements of utility". (The quoted statement was made in the context of enablement, i.e., the how-to-use requirement of the first paragraph of section 112.) See also *In re Bundy*, 209 USPQ 48 (1981). The only relevant concern of the Patent Office should be over the truth of assertions relating to enablement. The first paragraph of section 112 requires nothing more than objective enablement. See *In re Marzocchi, supra.*

The Examiner has not established any basis to doubt objective enablement. The Examiner has also provided no support for establishing that one of ordinary skill would doubt the objective truth of the asserted utility, which is enabled by the specification. The rejection therefore is improper under *In re Marzocchi.*

The claims rejected are directed to compounds and to method claims for the treatment of cancer, including in dependent claims, solid tumor, a tumor- or metastasis growth, Kaposis Sarkom, Hodgkin's disease or leukemia, the treatment of which are not objectively doubtable. There is no

indication that one of ordinary skill in the art would have questioned the effect of the drugs in view of the disclosure and the state of the art. See *Rasmusson v. Smithkline Beecham Co.*, 04-1191, 04-1192 (Fed. Cir. June 27, 2005). This is especially true since compounds with the claimed activities are known.

As discussed above, this is adequate to objectively enable an invention.

Nevertheless, applicants point to the specification which teaches, for example, various pathways the claimed diseases can be treated on page 1, lines 13-15, page 2, lines 11-13, and page 16, lines 14-16. See also the thorough discussion related to the treatment of the claimed diseases and the biological basis thereof on pages 39 to 42 and also on pages 44 to 48.

Additionally, the specification on pages 48 to 64 teaches various assays on how to test the compounds of the claimed invention. Assay results for numerous compounds of the claimed invention are provided. See, for example, the compounds added to the specification from the figures which were identified as having activities related to cancer.

Moreover, as discussed in *Wands*, "a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed." Applicants provide specific guidance as to how the claimed compounds can be tested for activity levels as discussed above in addition to showing numerous species of the compounds claimed with activities related to claimed diseases. Methods of administration of these compounds and amounts thereof are also taught on pages 42 to 43 of the specification.

A concern of the Office Action appears to be the presence of inoperative embodiments. However, even if the claims here are found to include inoperative embodiments, which is not admitted, they would still meet the requirements of 35 U.S.C. §112. See *In re Sarett*, 140 USPQ 474 (CCPA 1964), stating that

> The function of claims is to *point out* the invention and *define* the scope of the monopoly, not to exclude substances which are possibly of no use in practicing the invention. (Emphasis added.)

and *In re Dinh-Nguyen*, 181 USPQ 46 (CCPA 1974), stating that

> It is *not a function of the claims* to specifically exclude either possible inoperative substances or ineffective reactant proportions. (Emphasis added.)

In the present case, if any inoperative embodiments will be found, they would still not

diminish the numerous studies on pathway and related cancers thereto and the ability of one of ordinary skill in the art to practice the claimed invention without undue experimentation based on the guidance provided in the specification.

Rejections Under 35 USC 102

Claims 1 and 12 were rejected as allegedly anticipated by Ozeki and claims 1, 2, 12, 19-23 and 25 were rejected as allegedly independently of each other being anticipated by Andries and Dahmann. Applicants respectfully disagree with the rejections, but to further prosecution toward allowance, amend the claims by canceling claims 1 and 2. The various rejected dependent claims are either made dependent on claim 6, which is now rewritten in independent form, or canceled. Thus, the rejection is overcome at least by the amendments.

Rejections Under 35 USC 103

Claims 1, 2 and 12 were rejected as allegedly unpatentable over Ozeki. Applicants respectfully disagree with the rejection, but to further prosecution toward allowance, amend the claims by canceling claims 1 and 2 and making claim 12 dependent on claim 6. Thus, the rejection is overcome at least by the amendments.

Claims 1-12, 19-23 and 25 were rejected as allegedly independently of each other being unpatentable over Andries, Guo and Dahmann.

Andies provides a broad generic disclosure without any overlap with compounds of the present claims. For example, nothing in the references broad disclosure even teaches or suggests an R^2 group of the present claims.

Guo has a very broad generic disclosure from which a very large number of groups have to be independently chosen without guidance to end up with a compound of the present claims. Not a single preferred narrower generically disclosed group of compounds of the reference selects all the substitutens of the reference such that it would motivate one of ordinary skill in the art to make a compound of the present claims and many actually point away from the claimed

invention, see, for example, pages 8-9, both in their entirety. Moreover, most of such generically disclosed narrower groups still are very broad. The preferred compounds of the reference disclosed on pages 10-14 are all compounds with numerous various differences in each when compared to the compounds of the present claims. Based on the disclosure of Guo, one or ordinary skill in the art would not be motivated to select all the substitutents such that a compound of the present claims would be achieved. As such, there is no obviousness. It is not adequate that a disclosure provides a teaching from which one can piece together an invention. There has to be some teaching or suggestion in the disclosure which would motivate one of ordinary skill in the art to the claimed invention.

Moreover, the method claims of the present invention are not taught or suggested at all by Guo.

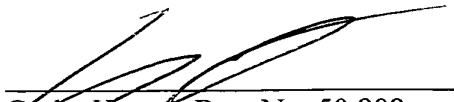
Dahmann also has a very broad disclosure. The possible substituents are defined, for example, from page 2 to page 10. Not one of the preferred groups is narrow enough to provide motivation to one of ordinary skill in the art to the selection of compounds according to the claimed invention. One of ordinary skill in the art is without guidance in the disclosure for selecting groups such that a compound of the present invention is achieved.

Furthermore applicants thoroughly checked the specific species disclosed in the reference by translating structure names into structures with applicant's available tools, including CAS-Numbers disclosed, etc., but could not find a single compound within the scope of present claim 1. Applicants request that the Patent Office point out any compound in the reference that may be of concern or at issue in any subsequent Office Actions if this rejection is maintained.

Reconsideration is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402, including fees for a two month extension associated with this response and additional claim fees, if any.

Respectfully submitted,



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Attorney Docket No.: SCH-1995

Date: July 17, 2006

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